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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/067,286	02/07/2002	Shinji Abe	401556/TAKADA	7913
23548	7590	03/11/2004	EXAMINER	
LEYDIG VOIT & MAYER, LTD 700 THIRTEENTH ST. NW SUITE 300 WASHINGTON, DC 20005-3960			LEE, BENNY T	
			ART UNIT	PAPER NUMBER
			2817	

DATE MAILED: 03/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

10/067286

☐ This application has been examined ☒ Responsive to communication filed on 24 Feb 2004 ☐ This action is made final.

A shortened statutory period for response to this action is set to expire Two (2) month(s), \_\_\_\_\_ days from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- |   |   |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892.        | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948.                  |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449.             | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____   |

Part II SUMMARY OF ACTION

1. ☒ Claims 1-20 are pending in the application.  
Of the above, claims \_\_\_\_\_ are withdrawn from consideration.
2. ☐ Claims \_\_\_\_\_ have been cancelled.
3. ☒ Claims 1-18; 19, 20 are allowed.
4. ☐ Claims \_\_\_\_\_ are rejected.
5. ☐ Claims \_\_\_\_\_ are objected to.
6. ☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on 24 Feb 2004. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☒ The proposed additional or substitute sheet(s) of drawings, filed on 24 Feb 2004, has (have) been ☐ approved by the examiner; ☒ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed \_\_\_\_\_, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. \_\_\_\_\_, filed on \_\_\_\_\_.
13. ☒ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

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This application is in condition for allowance except for the following formal matters:

**In the Specification:**

The disclosure is objected to because of the following informalities: In the replacement paragraph to page 6, line 6, sixth line therein, should --A-- precede "high-frequency"? Page 8, line 16, it is again requested that the statement --and may not be described in detail for all drawing figures-- be added after "numbers" to characterize that like reference numerals/labels in different drawing figures refer to the same feature/element, but not all like features may be described in all drawing figures in which they appear. Page 9, line 19, note that it is again requested that "sizes" be rewritten as --spacing-- for a proper characterization. Page 13, line 8, note that it is again requested that "Owing" should be rewritten as --Due-- & "the adoption" should be rephrased for clarity. Applicants' comments regarding this issue have been noted. However, the examiner urges adoption of the more conventional terminology. In the replacement paragraph to page 16, line 22, seventh line therein, note that "There high frequency ..." (as amended) does not appear appropriate and needs to be clarified. Appropriate correction is required.

**In the Drawings:**

The drawings are objected to because of the following: In fig. 4, for the section lines therein, should "V" correctly be --VI-- & should "VI" correctly be --V-- such as to be consistent with the views as depicted in figs. 5 & 6, respectively?; In Fig. 5, for conductive layer "32", note that the proposed cross-hatching (i.e. alternate thick & thin cross-hatching) is improper for these conductive layers (which require a thin line cross-hatching); In fig. 7, note that for section line "VIII", should the arrows be oriented 90 degrees from that depicted in the figure since the view

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from fig. 8 is looking along the axis of the opening rather than across (i.e. perpendicular to) the opening as indicated by the arrow direction of present fig. 7?; In figs. 8, 10, note that it is again requested that applicants' correctly cross-hatch the dielectric material depicted in these figures by the conventional alternate thick & thin cross-hatching; In fig. 9, for the section lines therein, should "X" correctly be -XI- & should "XI" correctly be -X—such as to be consistent with the views as depicted in Figs. 10 & 11, respectively. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

The amendment filed 2 February 2004 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: In the proposed drawing correction to Fig. 5, in the upper conductive layer "32", note that three (3) of the five (5) elements within the layer are "dielectric bars" while the remain two (2) elements are "metal walls". Such a depiction differs from original drawing figure 5 which depicts all of the elements in the layer to be metal walls. Accordingly such a proposed change in the drawings must be treated as "new matter". Clarification is needed.

Applicant is required to cancel the new matter in the reply to this Office Action.

Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

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Claims 1-18; 19, 20 are allowable over the prior art of record since none of the prior art of record discloses a waveguide where reflecting walls are formed of plural layers of dielectric bars having columnar shape with concentrically varying dielectric constant (i.e. with lower dielectric constant along the axis & higher dielectric constant spaced from the axis), and having the layers of dielectric bars arranged in a regular polygon configuration.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.



B. Lee

**BENNY T. LEE**  
**PRIMARY EXAMINER**  
**ART UNIT 2817**